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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,235	11/26/2001	Helena O'Shea	010403	9661

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QUALCOMM INCORPORATED
5775 MOREHOUSE DR.
SAN DIEGO, CA 92121

EXAMINER	
NGUYEN, TOAN D	
ART UNIT	PAPER NUMBER
2616	

NOTIFICATION DATE	DELIVERY MODE
07/08/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

us-docketing@qualcomm.com
kascanla@qualcomm.com
nanm@qualcomm.com

Office Action Summary	Application No.	Applicant(s)	
	09/995,235	O'SHEA, HELENA	
	Examiner	Art Unit	
	TOAN D. NGUYEN	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *46,48-56,58-67 and 69-80* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *46,48-56,58-67 and 69-80* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/22/08 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 46, 48-56, 58-67 and 69-80 have been considered but are moot in view of the new ground(s) of rejection.

The applicant argues with respect to claims 46-77, 79 and 80 on page 7, fifth paragraph that Jetzek does not disclose frequency offset (as measured in Hz) as recited in the present claims. The examiner agrees that Jetzek disclose a power level offset. However, Shohara clearly teaches at col. 5, lines 42-45 in the following passage: "In a track mode the AFC feedback control signal based on measured receiver frequency error is applied as a frequency offset command (wherein the frequency estimation information comprises a frequency offset means) to the downlink phase rotator to null receiver frequency error."

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to

> be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 46, 48-66, 67-77, 79 and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muller (US 6,845,238) in view of Jetzek et al. (US 6,546,252) and further in view of Shohara (US 6,463,266).

For claims 46, 51 and 52, Muller discloses inter-frequency measurement and handover for wireless communications, comprising:

obtaining frequency estimation information from a first wireless signal received from a first carrier in a first communication system (reference UTRAN system)(figure 10, reference step 10-6, col. 23, lines 16-17);

performing a handover to a second carrier in a second communication system (reference GSM system) distinct from the first communication system (reference UTRAN system)(figure 10, reference step 10-7, col. 23, lines 33-34).

However, Muller does not expressly disclose configuring for receiving a second wireless signal from the second carrier as a function of the frequency information. In an analogous art, Jetzek et al. disclose configuring for receiving a second wireless signal from the second carrier as a function of the frequency estimation information (col. 6, lines 24-31).

One skilled in the art would have recognized the configuring for receiving a second wireless signal from the second carrier as a function of the frequency information, and would have applied Jetzek et al.'s interfrequency handover in Muller's handover from a UTRAN system to a GSM system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to

use Jetzek et al.'s system and method for estimating intefrequency measurements used for radio network function in Muller's inter-frequency measurement and handover for wireless communications with the motivation being to provide the frequency estimation by providing the offset frequency (col. 6, lines 28-37).

Furthermore, Muller in view of Jetzek et al. does not expressly disclose a frequency tracking loop, and wherein the frequency estimation information comprises a frequency offset. In an analogous art, Shohara discloses a frequency tracking loop (figure 1, reference 100, col. 9, line 6), and wherein the frequency estimation information comprises a frequency offset (col. 5, lines 42-45).

Shohara discloses wherein the frequency tracking loop configures a voltage-controlled, temperature-compensated oscillator as a function of the frequency estimation information (col. 8, line 57-58 as set forth in claim 51), and wherein the frequency tracking loop configures a rotator as a function of the frequency estimation information (col. 9, line 4 as set forth in claim 52).

One skilled in the art would have recognized the frequency tracking loop, and would have applied Shohara's automatic frequency control 100 in Muller's handover from a UTRAN system to a GSM system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Shohora's radio frequency control for communications system in Muller's inter-frequency measurement and handover for wireless communications with the motivation being to produce a sequence of frequency offset commands for the

downlink and uplink phase rotators in a Type 2 AFC tracking loop configuration (figure 5, col. 16, lines 39-42).

For claim 48, Muller discloses wherein the first wireless signal is a CDMA signal and the second wireless signal is a GSM signal (figure 3D, col. 19, line 65).

For claim 49, Muller discloses wherein the CDMA signal is one of a W-CDMA signal and a CDMA2000 signal (figure 3B, col. 20, lines 8-10).

For claim 50, Muller discloses wherein the first wireless signal is a GSM signal and the second wireless signal is a CDMA (figure 11, col. 21, line 22).

For claim 53, Muller discloses obtaining handover information during an allocated time slot (figure 9, col. 19, lines 23-27).

For claim 54, Muller discloses wherein the handover information comprises at least one of received signal code power (RSCP), signal-to-interference ration (SIR), and a received signal strength indicator (RSSI)(col. 20, line 30).

For claim 55, Muller discloses wherein the allocated time slot occurs during a compressed mode (col. 19, line 23).

For claims 56, 62 and 63, Muller discloses inter-frequency measurement and handover for wireless communications, comprising:

obtaining frequency estimation information from a first wireless signal received from a first carrier in a first communication system (reference UTRAN system)(figure 10, reference step 10-6, col. 23, lines 16-17);

performing a handover to a second carrier in a second communication system (reference GSM system) distinct from the first communication system (reference UTRAN system)(figure 10, reference step 10-7, col. 23, lines 33-34).

However, Muller does not expressly disclose configuring for receiving a second wireless signal from the second carrier as a function of the frequency information. In an analogous art, Jetzek et al. disclose configuring for receiving a second wireless signal from the second carrier as a function of the frequency information (col. 6, lines 24-31).

One skilled in the art would have recognized the configuring for receiving a second wireless signal from the second carrier as a function of the frequency information, and would have applied Jetzek et al.'s interfrequency handover in Muller's handover from a UTRAN system to a GSM system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Jetzek et al.'s system and method for estimating intefrequency measurements used for radio network function in Muller's inter-frequency measurement and handover for wireless communications with the motivation being to provide the frequency estimation by providing the offset frequency (col. 6, lines 28-37).

Furthermore, Muller in view of Jetzek et al. does not expressly disclose a frequency tracking loop, and wherein the frequency estimation information comprises a frequency offset. In an analogous art, Shohara discloses a frequency tracking loop (figure 1, reference 100, col. 9, line 6), and wherein the

frequency estimation information comprises a frequency offset (col. 5, lines 42-45).

Shohara discloses wherein the frequency tracking loop configures a voltage-controlled, temperature-compensated oscillator as a function of the frequency estimation information (col. 8, line 57-58 as set forth in claim 62), and wherein the frequency tracking loop configures a rotator as a function of the frequency estimation information (col. 9, line 4 as set forth in claim 63).

One skilled in the art would have recognized the frequency tracking loop, and would have applied Shohara's automatic frequency control 100 in Muller's handover from a UTRAN system to a GSM system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Shohora's radio frequency control for communications system in Muller's inter-frequency measurement and handover for wireless communications with the motivation being to produce a sequence of frequency offset commands for the downlink and uplink phase rotators in a Type 2 AFC tracking loop configuration (figure 5, col. 16, lines 39-42).

For claim 58, Muller discloses wherein the first wireless signal is a CDMA signal (figure 3D, col. 19 line 65).

For claim 59, Muller discloses wherein the CDMA signal is one of a W-CDMA signal and a CDMA2000 signal (figure 3B, col. 20, lines 8-10).

For claim 60, Muller discloses wherein the second wireless signal is a GSM signal (figure 3D, col. 19, line 65).

For claim 61, Muller discloses wherein the first wireless signal is a GSM signal and the second wireless signal is a CDMA (figure 11, col. 21, line 22).

For claim 64, Muller discloses obtaining handover information during an allocated time slot (figure 9, col. 19, lines 23-27).

For claim 65, Muller discloses wherein the handover information comprises at least one of received signal code power (RSCP), signal-to-interference ration (SIR), and a received signal strength indicator (RSSI)(col. 20, line 30).

For claim 66, Muller discloses wherein the allocated time slot occurs during a compressed mode (col. 19, line 23).

For claims 67, 72, and 73, Muller discloses inter-frequency measurement and handover for wireless communications, comprising:

means for obtaining frequency estimation information from a first wireless signal received from a first carrier in a first communication system (reference UTRAN system)(figure 10, reference step 10-6, col. 23, lines 16-17);

means for performing a handover to a second carrier in a second communication system (reference GSM system) distinct from the first communication system (reference UTRAN system)(figure 10, reference step 10-7, col. 23, lines 33-34).

However, Muller does not expressly disclose means for configuring for receiving a second wireless signal from the second carrier as a function of the frequency information. In an analogous art, Jetzek et al. disclose means for

configuring for receiving a second wireless signal from the second carder as a function of the frequency information (col. 6, lines 24-31).

One skilled in the art would have recognized the means for configuring for receiving a second wireless signal from the second carrier as a function of the frequency information, and would have applied Jetzek et al.'s interfrequency handover in Muller's handover from a UTRAN system to a GSM system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Jetzek et al.'s system and method for estimating intefrequency measurements used for radio network function in Muller's inter-frequency measurement and handover for wireless communications with the motivation being to provide the frequency estimation by providing the offset frequency (col. 6, lines 28-37).

Furthermore, Muller in view of Jetzek et al. does not expressly disclose a frequency tracking loop, and wherein the frequency estimation information comprises a frequency offset. In an analogous art, Shohara discloses a frequency tracking loop (figure 1, reference 100, col. 9, line 6), and wherein the frequency estimation information comprises a frequency offset (col. 5, lines 42-45).

Shohara discloses wherein the frequency tracking loop configures a voltage-controlled, temperature-compensated oscillator as a function of the frequency estimation information (col. 8, line 57-58 as set forth in claim 72), and wherein the frequency tracking loop configures a rotator as a function of the frequency estimation information (col. 9 line 4 as set forth in claim 73).

One skilled in the art would have recognized the frequency tracking loop, and would have applied Shohara's automatic frequency control 100 in Muller's handover from a UTRAN system to a GSM system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Shohora's radio frequency control for communications system in Muller's inter-frequency measurement and handover for wireless communications with the motivation being to produce a sequence of frequency offset commands for the downlink and uplink phase rotators in a Type 2 AFC tracking loop configuration (figure 5, col. 16, lines 39-42).

For claim 69, Muller discloses wherein the first wireless signal is a CDMA signal and the second wireless signal is a GSM signal (figure 3D, col. 19 line 65).

For claim 70, Muller discloses wherein the CDMA signal is one of a W-CDMA signal and a CDMA2000 signal (figure 3B, col. 20, lines 8-10).

For claim 71, Muller discloses wherein the first wireless signal is a GSM signal and the second wireless signal is a CDMA (figure 11, col. 21, line 22).

For claim 74, Muller discloses obtaining handover information during an allocated time slot (figure 9, col. 19, lines 23-27).

For claim 75, Muller discloses wherein the handover information comprises at least one of received signal code power (RSCP), signal-to-interference ration (SIR), and a received signal strength indicator (RSSI)(col. 20, line 30).

For claim 76, Muller discloses wherein the allocated time slot occurs during a compressed mode (col. 19, line 23).

For claims 77, 79 and 80, Muller discloses inter-frequency measurement and handover for wireless communications, comprising:

determining a frequency error of a first wireless signal operating at a carrier frequency (reference UTRAN system)(figure 10, reference step 10-6, col. 23, lines 16-17); and

performing a handover to a second carrier (reference GSM system) (figure 10, reference step 10-7, col. 23, lines 33-34).

However, Muller does not expressly disclose configuring for receiving a second wireless signal operating at a second carrier based at least in part on the frequency error of the first wireless signals. In an analogous art, Jetzek et al. disclose configuring for receiving a second wireless signal operating at a second carrier based at least in part on the frequency error of the first wireless signals (col. 6, lines 24-31).

Jetzek et al. disclose wherein determining the frequency error comprises determining a frequency offset of a carrier frequency of the first wireless signal relative to a desired carrier frequency (col. 6, lines 28-37 as set forth in claim 79), and determining a ratio of a desired carder frequency to a carrier frequency of the first wireless signal relative; and applying a frequency correction to the frequency tracking loop based on the ratio (col. 6, lines 24-37 as set forth in claim 80).

One skilled in the art would have recognized the configuring for receiving a second wireless signal operating at a second carrier based at least in part on the frequency error of the first wireless signals, and would have applied Jetzek et

al.'s interfrequency handover in Muller's handover from a UTRAN system to a GSM system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Jetzek et al.'s system and method for estimating intefrequency measurements used for radio network function in Muller's inter-frequency measurement and handover for wireless communications with the motivation being to provide the frequency estimation by providing the offset frequency (col. 6, lines 28-37).

Furthermore, Muller in view of Jetzek et al. does not expressly disclose a frequency tracking loop. In an analogous art, Shohara discloses a frequency tracking loop (figure 1, reference 100, col. 9, line 6).

One skilled in the art would have recognized the frequency tracking loop, and would have applied Shohara's automatic frequency control 100 in Muller's handover from a UTRAN system to a GSM system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Shohora's radio frequency control for communications system in Muller's inter-frequency measurement and handover for wireless communications with the motivation being to produce a sequence of frequency offset commands for the downlink and uplink phase rotators in a Type 2 AFC tracking loop configuration (figure 5, col. 16, lines 39-42).

5. Claim 78 is rejected under 35 U.S.C. 103(a) as being unpatentable over Muller (US 6,845,238) in view of Jetzek et al. (US 6,546,252) and Shohara (US 6,463,266) further in view of Vihriala (US 6,956,895).

For claim 78, Muller in view of Jetzek et al. and Shohara does not expressly disclose wherein determining the frequency error comprises averaging a frequency offset from a plurality of fingers of a RAKE receiver. In an analogous art, Vihriala discloses wherein determining the frequency error comprises averaging a frequency offset from a plurality of fingers of a RAKE receiver (col. 4, lines 20-21).

One skilled in the art would have recognized the averaging a frequency offset from a plurality of fingers of a RAKE receiver, and would have applied Vihriala's rake receiver in Muller's handover from a UTRAN system to a GSM system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Vihriala's method and arrangement for reducing frequency offset in a radio receiver in Muller's inter-frequency measurement and handover for wireless communications with the motivation being to provide the frequency error estimates of all fingers can be averaged (col. 4, line 21).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TOAN D. NGUYEN whose telephone number is (571)272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. D. N./
Examiner, Art Unit 2616

/FIRMIN BACKER/
Supervisory Patent Examiner, Art Unit 2616